PUBLIC HEALTH

Report by Dr. J. D. Grant.

744 751 During its first year of existence[1] the Public Health Service had its fair share of growing pains caused chiefly by Staff changes, a shortage of trained technical and clerical personnel and an apathy or lack of education on the part of local bodies and people in matters of hygiene and sanitation. On the other hand, the port and quarantine side functioned smoothly, anti-malaria control measures were extended to cover the whole Island except for a few villages in the southern end, and a Boys' School Medical Service was inaugurated.

Staff. Mr. L. J. Hanvey, Public Health Inspector, resigned on the 1st March to rejoin the Anglo-Iranian Oil Company at Aden and was replaced by Mr. F. Burgin who arrived on the 2nd June.

The following new appointments were made :—

Dr. Ali Mustafa, School Medical Officer, 26th November.
Dr. P. P. Mathew, Port Health Officer, 22nd June.

Trained Personnel. The shortage of this class of labour was a constant problem, and to fill some of the gaps it was necessary to recruit from Pakistan and India. These sources will have to be tapped further until requirements can be met from Bahrain.

Hygiene and Sanitation. Sanitary measures were chiefly confined to the Municipal areas, and in each case the local Council was responsible for carrying out these duties, with the Public Health Authorities acting in an advisory capacity. This arrangement proved unsatisfactory, as for one reason or another, the Baladiyas were very loath to carry out the suggestions offered and most reluctant to implement the recently drawn up Sanitary Bye-laws. At the end of the year it was decided that much stronger action was required and that Health Education by legislation would have to be resorted to where necessary; the Public Health Authorities were therefore invested with summary powers to enforce sanitary measures.

744 ● 364 The absence of a proper sewerage and drainage system continues to be one of the greatest stumbling blocks to any effort or progress in improving the standard of sanitation in Municipal areas. The present rapid rate of building adds daily to the problem and the stage has now been reached when it is imperative to change from the prevailing highly dangerous and obnoxious cesspool method of conservancy and drainage. The impending survey by a consultant Sanitary Engineer with this end in view is being looked forward to eagerly.

Regular inspections resulted in a slight improvement in the standard of cleanliness of restaurants, eating houses, coffee shops, bakeries, aerated water factories and other premises used for the preparation and sale of foodstuffs. In future, licences for these premises will be issued direct by the Public Health Department after they have been inspected and passed as satisfactory and those premises which, after due warning fail to reach the standard required will be closed down. The hawking of foodstuffs will not be permitted unless adequate precautions against contamination by dust and flies are taken and the general sanitary conditions under which this type of business is conducted are satisfactory.

The new fish, meat and vegetable and fruit markets at Quadabiya were opened during the year, but so far have not proved very popular. They set a very good standard with fly proofing, cement floors, washing and drainage facilities and adjacent rubbish receptacles and latrines. A similar type of building is under construction in Manama for the sale of fruit and vegetables. The other Manama markets and all the Muharraq ones are in such an insanitary state that their reconstruction on the above lines is most essential and should be carried out without further delay.

751 The standard of domestic sanitation is poor. Dirt, disease and squalor reign in many houses causing much unnecessary sickness at considerable cost to hospital and medical services. Better and cleaner houses and less money spent on drugs and more on drains would be of greater value in the task of promoting health and preventing disease.

[1] [presumably A.D. 1952-19?? -- Analyst]

MUNICIPALITIES

MANAMA MUNICIPALITY

(From the report of Mr. Mohamed Saleh Shater, Secretary of the Manama Municipality)

At the beginning of the year, owing to sectarian differences between Sunni and Shia members in 1371, which caused the resignation of the Shia members, Municipal affairs were being dealt with by a committee of Sunnis. This was the situation until the middle of the year when the Government succeeded in persuading the Shia members to resume their duties on the Council. They returned on the understanding that they would serve for only one year after which an election should be held.

During the latter part of the year the Council functioned in a more or less normal manner; having shelving all matters which might cause controversy between the sects the Council succeeded in performing its duties without serious differences. The situation, however, was not satisfactory.

Finance. The Financial Committee which drew up the budget was formed from the temporary Sunni committee. Estimated revenue for 1372 was Rs. 7,04,000 and expenditure was assessed at the same figure. The actual revenue exceeded the estimate by Rs. 1,16,000, the expenditure was Rs. 61,000 more than was expected and at the end of the year a surplus of revenue over expenditure amounting to Rs. 61,000 was added to the Reserve which was then Rs. 2,83,000.

The increase in revenue was due to a great extent to higher receipts from house and shop taxes. There were many new buildings in the town and higher rents were charged for existing buildings, both for houses and shops. House taxes and shop taxes on buildings which are leased are charged on a percentage basis of the rent. Taxation on houses which are occupied by their owners is extremely low in comparison with that of rented premises. A large proportion of the rented houses are occupied by foreigners and most of the houses in which the owners live are occupied by people of the country.

During the year the Municipality sold land to the public at the price of Rs. 35,200 and it purchased a new fire engine for Rs. 48,000. The Government presented to the Municipality a motor-driven trailer fire pump and jeep, a rubbish carrying vehicle and a gully emptying vehicle.

Municipal activities. Town cleaning was effected during the year by two trucks and 30 donkey carts, town rubbish was utilised to reclaim a large portion of sea on the shore at Hora, opposite Cable and Wireless premises. The method of employing donkey carts to carry town refuse is not a satisfactory one. An order was placed in England during the summer for small rubbish-carrying vehicles which can be used in narrow streets.

A number of roads in the town were metalled, the area dealt with was about 380,000 square feet on which was used 480,000 cubic feet of stone and 105,000 cubic feet of sand, the whole costing approximately Rs. 1,76,000.

Some progress was made in widening streets in the bazaar area, 112 new street lights were installed and more trees were planted on the roads, unfortunately each year a number of trees are destroyed, by wind or sometimes by rain which when it falls strongly seems to kill both plants and trees.

There was much building activity both in the town and on the outskirts of the town, numbers of small houses were built for occupation by their owners and more European style bungalows and flats were built for letting. House rents are excessively high, landlords expect to recover the cost of their property in less than ten years, so building houses for letting is at present a profitable investment. However, so many houses are now being built that it seems possible that in a short time there may be more houses than tenants.

During the year [illegible]s for new buildings were issued by the Municipality for 144 stone houses and 100 barasti huts and permits for repairs and additions to 186 shops and 717 houses were also granted.

1 [A D 1951-52 - Analyst]

HIDD MUNICIPALITY

651 633 **Finance.** The total revenue was Rs. 28,739, slightly higher than in 1372. At the end of the year there was a surplus of Rs. 6,102. The amount expended was almost the same as in the previous year. At the end of the year His Highness granted Rs. 25,000 to the Municipal funds for building property to increase the Municipal revenue.

The town was clean and well kept and some progress was made in widening the one main street which passes through the length of the town.

RAFAA MUNICIPALITY

which includes East, West and North Rafaa

(From the report of Shaikh Abdulla bin Khalid, President of the Municipal Council)

651 633 363 This Municipality, the last one to be formed in Bahrain, having been established in 1371, carried out its duties successfully during the year. Its revenue was Rs. 37,000 of which Rs. 20,000 was a grant from the Government.

Houses were registered and numbered for the purpose of charging house tax and a piece of land below East Rafaa was laid out as a building area, in conjunction with the Land Department. The Municipality began work on widening the road which passes through East Rafaa and removed part of some houses in order to widen this road.

365 Repairs were carried out to Ain Hinainiyah, the old well on the plain below East Rafaa which provides fresh drinking water, which used to be sold in Manama at a high price, being of superior quality to the artesian well water.

364 Ancient rubbish heaps, which disfigured the edge of the town, were removed and the material was used to fill in deep pits, inside the town, where mud had been dug for building houses.

The Municipality began to establish a regular town cleaning service.

MINORS' ESTATES DEPARTMENT

(From the report of Mr. Mohammed Dowaiger, Superintendent of the Department)

471 657 The Department took over the administration of 18 new estates and dealt with 28 compensation cases relating to persons in the employment of the Bahrain Government and the Bahrain Petroleum Company. The value of the estates was Rs. 131,000. Compensation paid by the Bahrain Petroleum Company in cases of death or disablement of employees is passed by the Government to the Minors' Estates Department which pays the persons who are entitled to receive compensation.

657 427 Rents of property administered by the Department produced almost 2 lakhs, the number of properties, including shops, houses, gardens, etc., was 530. The Department sold nine lots of property during the year, for approximately half a lakh and made purchases amounting to Rs. 9,000. The sum of Rs. [illegible]000 was recovered from divers who were in debt to various estates.

63:Simmons et al G-5 (1941-1951) 1954
M1 Middle East
BAHRAIN MZ 2

Pollution of the soil is common, although the practice is discouraged in the towns.

Fauna and Flora

Except for investigations relating to the anopheline vectors of malaria, few entomologic studies have been undertaken in Bahrain. Five species of anopheline mosquitoes have been identified—*Anopheles stephensi, A. culicifacies, A. sergenti, A. fluviatilis* and *A. pulcherrimus*. *A. stephensi* breeds in shallow wells, seepage pools, water storage tanks and irrigation ditches, and is responsible for a large part of the malaria transmission on the islands. While *A. culicifacies* is probably a vector in some localities, it is generally regarded as of minor importance. *A. gambiae* is not indigenous, but it is sometimes found on board dhows upon arrival in port. Species of *Culex* are widespread. However, no vectors of filariasis have been recorded locally. Species of *Aedes* are known to be present.

A campaign for the control of malarial mosquitoes has been carried on by the government since 1939. Supplementary programs are conducted by the Bahrain Petroleum Company in the vicinity of its installations and throughout the southern half of Bahrain Island. The antilarval measures include the treatment of breeding places with oil or DDT preparations and the stocking of wells and drainage ditches with the larvivorous fish, *Gambusia*. The prevalence of anopheline mosquitoes reached minimal proportions in Manama by 1948, but was still extensive in the surrounding suburbs and date garden areas. The following year, the spraying of the marshes, rubbish dumps and gardens around the main towns and the residual spraying of the houses and the bazaars with DDT and Gammexane preparations were introduced for the suppression of both flies and mosquitoes.

Flies are abundant, although their numbers have been markedly reduced in the towns since the inauguration of the residual

P. 259(B)

Bahrain Petroleum Company. Two or three Indian dentists are reported to be practicing in Manama.

Nurses. In 1951, there were 24 trained nurses on the staffs of the different hospitals—10 in the government hospitals, 12 in the oil industry hospital and 2 in the mission hospital. In addition, 2 male nurses were working in the government institutions and 5 in the industrial. Ten nurse-midwives were connected with the government maternity hospitals and clinic.

Others. Bahraini and Indian medical assistants in various categories were employed in the hospitals and dispensaries.

DISEASES

In the absence of adequate reporting of morbidity and mortality on the islands, the information available regarding the prevalence of specific diseases is necessarily incomplete. Few scientific medical investigations have been undertaken in this area. The records of cases treated in the hospitals and the dispensaries provide data of general value in assessing the health status of the people, but they are limited in scope and applicable as a rule to a small percentage of the inhabitants. Moreover, the population is continually fluctuating, and many cases of illness treated in the local hospitals originated outside Bahrain.

Diseases Spread or Contracted Chiefly Through Intestinal or Urinary Tract

Typhoid and Paratyphoid Fevers. Typhoid fever is endemic, but apparently it is not as prevalent as the insanitary conditions regarding food and water supplies would seem to warrant. Cases tend to be sporadic, although water-borne outbreaks attributed to contaminated well supplies sometimes occur. From 48 to 60 cases were reported annually in the 4 years 1948-51—probably a small part of the numbers actually present. Paratyphoid fevers are common. According to local medical authorities, most of the cases seen in the hospitals are para-

63:Simmons et al G-5 (1941-1951) 1954
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BAHRAIN MZ 2

Responsibility for the protection of the health of the people resides in the Public Health Department of the Bahrain government. It has curative and preventive divisions, and is administered by a Chief Medical Officer with headquarters in Manama. Four general hospitals—government, mission and industrial—with an aggregate capacity of 324 beds were functioning in 1951. In addition, the government services operated 5 special hospitals with 86 beds, maternity clinics and scattered dispensaries for men and women. Water supplies are obtained from large numbers of artesian wells, as well as from springs and shallow wells. The town of Manama has a piped artesian supply which serves over 70 per cent of the houses. Sewage is disposed of by primitive methods, and most well and spring water sources are polluted.

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p. 265(A)